

# Fiscal Year 2003 I Authorized Equipment List

The FY 2003 SHSGP authorized equipment list was derived from the Standardized Equipment List (SEL). The SEL was developed by the Interagency Board (IAB) for Equipment Standardization and Interoperability. The IAB compiled the SEL to delineate the types of equipment necessary for terrorist incident response. Because the SEL also contains lists of general use and support equipment, a more narrow list was derived from the SEL to identify the specific types of specialized equipment authorized for purchase under the FY 2003 SHSGP. A cross-section of officials representing the U.S. Department of Homeland Security, the U.S. Department of Justice, the Public Health Service, the Federal Emergency Management Agency, the U.S. Department of Energy, and state and local CBRNE response experts assisted in the development of this authorized equipment purchase list and in identifying unallowable items.

Authorized equipment purchases may be made in the following categories:

1. Personal Protective Equipment (PPE)
2. Explosive Device Mitigation and Remediation Equipment
3. CBRNE Search & Rescue Equipment
4. Interoperable Communications Equipment
5. Detection Equipment
6. Decontamination Equipment
7. Physical Security Enhancement Equipment
8. Terrorism Incident Prevention Equipment
9. CBRNE Logistical Support Equipment
10. CBRNE Incident Response Vehicles
11. Medical Supplies and Limited Types of Pharmaceuticals
12. CBRNE Reference Materials

- 1. Personal Protective Equipment** - Equipment worn to protect the individual from hazardous materials and contamination. Levels of protection vary and are divided into three categories based on the degree of protection afforded. The following constitutes equipment intended for use in a chemical/biological threat environment:

**Level A.** Fully encapsulated, liquid and vapor protective ensemble selected when the highest level of skin, respiratory and eye protection is required. The following constitutes Level A equipment for consideration:

- Fully Encapsulated Liquid and Vapor Protection Ensemble, reusable or disposable (tested and certified against CB threats)
- Fully Encapsulated Training Suits
- Closed-Circuit Rebreather (minimum 2-hour supply, preferred), or open-circuit Self-Contained Breathing Apparatus (SCBA) or, when appropriate, Air-Line System with 15-minute minimum escape SCBA
- Spare Cylinders/Bottles for rebreathers or SCBA and service/repair kits
- Chemical Resistant Gloves, including thermal, as appropriate to hazard
- Personal Cooling System; Vest or Full Suit with support equipment needed for maintaining body core temperature within acceptable limits
- Hardhat/helmet
- Chemical/Biological Protective Undergarment
- Inner Gloves
- Approved Chemical Resistant Tape
- Chemical Resistant Boots, Steel or Fiberglass Toe and Shank

- Chemical Resistant Outer Booties

**Level B.** Liquid splash resistant ensemble used with highest level of respiratory protection. The following constitute Level B equipment and should be considered for use:

- Liquid Splash Resistant Chemical Clothing, encapsulated or non-encapsulated
- Liquid Splash Resistant Hood
- Closed-Circuit Rebreather (minimum 2-hour supply, preferred), open-circuit SCBA, or when appropriate, Air-Line System with 15-minute minimum escape SCBA
- Spare Cylinders/Bottles for rebreathers or SCBA and service/repair kits
- Chemical Resistant Gloves, including thermal, as appropriate to hazard
- Personal Cooling System; Vest or Full Suit with support equipment needed for maintaining body core temperature within acceptable limits
- Hardhat/helmet
- Chemical/Biological Protective Undergarment
- Inner Gloves
- Approved Chemical Resistant Tape
- Chemical Resistant Boots, Steel or Fiberglass Toe and Shank
- Chemical Resistant Outer Booties

**Level C.** Liquid splash resistant ensemble, with same level of skin protection of Level B, used when the concentration(s) and type(s) of airborne substances(s) are known and the criteria for using air-purifying respirators are met. The following constitute Level C equipment and should be considered for use:

- Liquid Chemical Splash Resistant Clothing (permeable or non-permeable)
- Liquid Chemical Splash Resistant Hood (permeable or non-permeable)
- Tight-fitting, Full Facepiece, Negative Pressure Air Purifying Respirator with the appropriate cartridge(s) or canister(s) and P100 filter(s) for protection against toxic industrial chemicals, particulates, and military specific agents.
- Tight-fitting, Full Facepiece, Powered Air Purifying Respirator (PAPR) with chemically resistant hood with appropriate cartridge(s) or canister(s) and high-efficiency filter(s) for protection against toxic industrial chemicals, particulates, and military specific agents.
- Equipment or system batteries will include those that are rechargeable (e.g. NiCad) or non-rechargeable with extended shelf life (e.g. Lithium)
- Chemical Resistant Gloves, including thermal, as appropriate to hazard
- Personal Cooling System; Vest or Full Suit with support equipment
- Hardhat
- Inner Chemical/Biological Resistant Garment
- Inner Gloves
- Chemical Resistant Tape
- Chemical Resistant Boots, Steel or Fiberglass Toe and Shank
- Chemical Resistant Outer Booties

**Level D.** Selected when no respiratory protection and minimal skin protection is required, and the atmosphere contains no known hazard and work functions preclude splashes, immersion, or the potential for unexpected inhalation of, or contact with, hazardous levels of any chemicals.

- Escape mask for self-rescue

*Note: During CBRNE response operations, the incident commander determines the appropriate level of personal protective equipment. As a guide, Levels A, B, and C are applicable for chemical/ biological/ radiological contaminated environments. Personnel entering protective postures must undergo medical monitoring prior to and after entry.*

***All SCBAs should meet standards established by the National Institute for Occupational Safety and Health (NIOSH) for occupational use by emergency responders when exposed to Chemical, Biological, Radiological and Nuclear (CBRN) agents in accordance with Special Tests under NIOSH 42 CFR 84.63(c), procedure number RCT-CBRN-STP-0002, dated December 14, 2001. ODP anticipates making compliance with NIOSH SCBA CBRN certification a mandatory requirement for all SCBAs purchased under the FY 2004 State Homeland Security Grant Program.***

*Grant recipients should purchase: 1) protective ensembles for chemical and biological terrorism incidents that are certified as compliant with Class 1, Class 2, or Class 3 requirements of National Fire Protection Association (NFPA) 1994, Protective Ensembles for Chemical/Biological Terrorism Incidents; 2) protective ensembles for hazardous materials emergencies that are certified as compliant with NFPA 1991, Standard on Vapor Protective Ensembles for Hazardous Materials Emergencies, including the chemical and biological terrorism protection; 3) protective ensembles for search and rescue or search and recovery operations where there is no exposure to chemical or biological warfare or terrorism agents and where exposure to flame and heat is unlikely or nonexistent that are certified as compliant with NFPA 1951, Standard on Protective Ensemble for USAR Operations, and, 4) protective clothing from blood and body fluid pathogens for persons providing treatment to victims after decontamination that are certified as compliant with NFPA 1999, Standard on Protective Clothing for Emergency Medical Operations.*

*For more information regarding these standards, please refer to the following web sites: The National Fire Protection Association – <http://www.nfpa.org>  
National Institute for Occupational Safety and Health – <http://www.cdc.gov/niosh>*

**2. Explosive Device Mitigation and Remediation** - Equipment providing for the mitigation and remediation of explosive devices in a CBRNE environment:

- Bomb Search Protective Ensemble for Chemical/Biological Response
- Chemical/Biological Undergarment for Bomb Search Protective Ensemble
- Cooling Garments to manage heat stress
- Ballistic Threat Body Armor (not for riot suppression)
- Ballistic Threat Helmet (not for riot suppression)
- Blast and Ballistic Threat Eye Protection (not for riot suppression)
- Blast and Overpressure Threat Ear Protection (not for riot suppression)
- Fire Resistant Gloves
- Dearmer/Disrupter
- Real Time X-Ray Unit;
- Portable X-Ray Unit
- CBRNE Compatible Total Containment Vessel
- (TCV) CBRNE Upgrades for Existing TCV
- Robot; Robot Upgrades
- Fiber Optic Kit (inspection or viewing)
- Tents, standard or air inflatable for chem/bio protection
- Inspection mirrors
- Ion Track Explosive Detector

**3. CBRNE Search and Rescue Equipment-** Equipment providing a technical search and rescue capability for a CBRNE environment:

- Hydraulic tools; hydraulic power unit
- Listening devices; hearing protection
- Search cameras ( including thermal and infrared imaging)
- Breaking devices (including spreaders, saws and hammers)
- Lifting devices (including air bag systems, hydraulic rams, jacks, ropes and block and tackle)
- Blocking and bracing materials
- Evacuation chairs (for evacuation of disabled personnel)
- Ventilation fans

**4. Interoperable Communications Equipment-** Equipment and systems providing connectivity and electrical interoperability between local and interagency organizations to coordinate CBRNE response operations:

- Land Mobile, Two-Way In-Suit Communications (secure, hands-free, fully duplex, optional), including air-to-ground capability (as required)
- Antenna systems
- Personnel Alert Safety System (PASS) - (location and physiological monitoring systems optional)
- Personnel Accountability Systems
- Individual/portable radios, software radios, portable repeaters, radio interconnect systems, satellite phones, batteries, chargers and battery conditioning systems
- Computer systems designated for use in an integrated system to assist with detection and communication efforts (must be linked with integrated software packages designed specifically for chemical and/or biological agent detection and communication purposes)
- Portable Meteorological Station (monitors temperature, wind speed, wind direction and barometric pressure at a minimum)
- Computer aided dispatch system
- Commercially available crisis management software
- Mobile Display Terminals

*Note: In an effort to improve public safety interoperability, all new or upgraded radio systems and new radio equipment should be compatible with a suite of standards called ANSI11TIA/EIA-102 Phase I (Project 25). These standards have been developed to allow for backward compatibility with existing digital and analog systems and provide for interoperability in future systems. The FCC has chosen the Project 25*

*suite of standards for voice and low moderate speed data interoperability in the new nationwide 700 MHz frequency band and the Integrated Wireless Network (IWN) of the U.S. Justice and Treasury Departments has chosen the Project 25 suite of standards for their new radio equipment. **In an effort to realize improved interoperability, all radios purchased under this grant should be APCO 25 compliant.***

**5. Detection Equipment** - Equipment to sample, detect, identify, quantify, and monitor for chemical, biological, radiological/nuclear and explosive agents throughout designated areas or at specific points:

**Chemical**

- M-8 Detection Paper for chemical agent identification
- M-9 Detection Paper (roll) for chemical agent (military grade) detection

- M-256 Detection Kit for Chemical Agent (weapons grade-blister: CX/HD/L; blood: AC/CK; and nerve: GB/VX) detection
- M-256 Training Kit
- M-18 Series Chemical Agent Detector Kit for surface/vapor chemical agent analysis
- Hazard Categorizing (HAZCAT) Kits
- Photo-Ionization Detector (PID)
- Flame Ionization Detector (FID)
- Surface Acoustic Wave Detector
- Gas Chromatograph/Mass Spectrometer (GC/MS)
- Ion Mobility Spectrometry
- Stand-Off Chemical Detector
- M-272 Chemical Agent Water Test Kit
- Colorimetric Tube/Chip Kit specific for TIC s and CBRNE applications
- Multi-gas Meter with minimum of O2 and LEL
- Leak Detectors (soap solution, ammonium hydroxide, etc)
- pH Paper/pH Meter
- Waste Water Classifier Kit
- Oxidizing Paper
- Protective cases for sensitive detection equipment storage & transport

### **Biological**

- Point Detection Systems/Kits (Immunoassay or other technology)

### **Radiological/Nuclear**

- Radiation detection equipment (electronic or other technology that detects alpha, beta, gamma, and high intensity gamma)
- Personal Dosimeter
- Scintillation Fluid (radiological) pre-packaged
- Radiation monitors

### **Explosive**

- Canines (initial acquisition, initial operational capability only)

### **6. Decontamination Equipment** - Equipment and material used to clean, remediate, remove or mitigate chemical and biological contamination:

#### **Chemical**

- Decontamination system for individual and mass application with environmental controls, water heating system, showers, lighting, and transportation (trailer)
- Decon Litters/roller systems
- Extraction Litters, rollable
- Runoff Containment Bladder(s), decontamination shower waste collection with intrinsically-safe evacuation pumps, hoses, connectors, scrub brushes, nozzles
- Spill Containment Devices
- Overpak Drums
- Non-Transparent Cadaver Bags (CDC standard)
- Hand Carts
- Waste water classification kits/strips

## **Biological**

- HEPA (High Efficiency Particulate Air) Vacuum for dry decontamination

## **7. Physical Security Enhancement Equipment** - Equipment to enhance the physical security of critical infrastructure.

### **Surveillance, Warning, Access/intrusion Control**

#### Ground

- Motion Detector Systems: Acoustic; Infrared; Seismic; Magnetometers
- Barriers: Fences; Jersey Walls
- Impact Resistant Doors and Gates
- Portal Systems; locking devices for access control
- Alarm Systems
- Video Assessment/Cameras: Standard, Low Light, IR, Automated Detection
- Personnel Identification: Visual; Electronic; Acoustic; Laser; Scanners; Cyphers/Codes
- X-Ray Units
- Magnetometers
- Vehicle Identification: Visual; Electronic; Acoustic; Laser; Radar

#### Waterfront

- Radar Systems
- Video Assessment System/Cameras: Standard, Low Light, IR, Automated Detection
- Diver/Swimmer Detection Systems; Sonar
- Impact Resistant Doors and Gates - Portal Systems
- Hull Scanning Equipment
- Plus all those for Ground

### **Sensors - Agent/Explosives Detection**

- Chemical: Active/Passive; Mobile/Fixed; Handheld
- Biological: Active/Passive; Mobile/Fixed; Handheld
- Radiological
- Nuclear
- Ground/Wall Penetrating Radar

### **Inspection/Detection Systems**

- Vehicle & Cargo Inspection System - Gamma-ray
- Mobile Search & Inspection System - X-ray
- Non-Invasive Radiological/Chem/Bio/Explosives System - Pulsed Neutron Activation

### **Explosion Protection**

- Blast/Shock/Impact Resistant Systems
- Protective Clothing

- Column and Surface Wraps; Breakage/Shatter Resistant Glass; Window Wraps
- Robotic Disarm/Disable Systems

**8. Terrorism Incident Prevention Equipment (Terrorism Early Warning, Prevention, and Deterrence Equipment and Technologies)** - State and local public safety agencies will increasingly rely on the integration of emerging technologies and equipment to improve jurisdictional capabilities to deter and prevent terrorist incidents. This includes, but is not limited to, equipment and associated components that enhance a jurisdiction's ability to disseminate advanced warning information to prevent a terrorist incident or disrupt a terrorist's ability to carry out the event, including information sharing, threat recognition, and public/private sector collaboration.

- Data collection/information gathering software
- Data synthesis software
- Geographic Information System information technology and software
- Law enforcement surveillance equipment

**9. CBRNE Logistical Support Equipment** - Logistical support gear used to store and transport the equipment to the CBRNE incident site and handle it once onsite. This category also includes small support equipment including intrinsically-safe (non sparking) hand tools required to support a variety of tasks and to maintain equipment purchased under the grant as well as general support equipment intended to support the CBRNE incident response:

- Equipment trailers
- Weather-tight containers for equipment storage
- Software for equipment tracking and inventory
- Handheld computers for Emergency Response applications
- Small Hand tools
- Binoculars, head lamps, range finders and spotting scopes (not for weapons use)
- Small Generators to operate light sets, water pumps for decontamination sets
- Light sets for nighttime operations/security
- Electrical Current detectors
- Equipment harnesses, belts, and vests
- Isolation containers for suspected chemical/biological samples
- Bull horns
- Water pumps for decontamination systems
- Bar code scanner/reader for equipment inventory control
- Badging system equipment and supplies
- Cascade system for refilling SCBA oxygen bottles
- SCBA fit test equipment and software to conduct flow testing
- Testing Equipment for fully encapsulated suits
- Cooling/Heating Ventilation Fans (personnel and decontamination tent use)
- HAZMAT Gear Bag/Box

**10. CBRNE Incident Response Vehicles** -This category includes special-purpose vehicles for the transport of CBRNE response equipment and personnel to the incident site. Licensing and registration fees are the responsibility of the jurisdiction and are not allowable under this grant. In addition, general purpose vehicles (squad cars, executive transportation, etc.), fire apparatus, and tactical/armored assault vehicles are not allowable. Allowable vehicles include:

- Mobile command post vehicles
- Hazardous materials (HazMat) response vehicles

- Bomb response vehicles
- Prime movers for equipment trailers
- 2-wheel personal transport vehicles for transporting fully suited bomb technicians, Level A/B suited technicians to the Hot Zone
- Multi-wheeled all terrain vehicles for transporting personnel and equipment to and from the Hot Zone

**11. Medical Supplies and Pharmaceuticals** - Medical supplies and pharmaceuticals required for response to a CBRNE incident. Grantees are responsible for replenishing items after shelf-life expiration date(s).

### **Medical Supplies**

- Automatic Biphasic External Defibrillators and carry bags
- Equipment and supplies for establishing and maintaining a patient airway at the advanced life support level (to include OP and NG airways; ET tubes, styletes, blades, and handles; portable suction devices and catheters; and stethoscopes for monitoring breath sounds)
- Blood Pressure Cuffs
- IV Administration Sets (Macro and Micro) and Pressure Infusing Bags
- IV Catheters (14, 16, 18, 20, and 22 gauge)
- IV Catheters (Butterfly 22, 24 and 26 gauge)
- Manual Biphasic Defibrillators (defibrillator, pacemaker, 12 lead) and carry bags
- Eye Lense for Lavage or Continuous Medication
- Morgan Eye Shields
- Nasogastric Tubes
- Oxygen administration equipment and supplies (including bag valve masks; rebreather and non-rebreather masks, and nasal cannulas; oxygen cylinders, regulators, tubing, and manifold distribution systems; and pulse oximetry, Capnography & CO<sub>2</sub> detection devices)
- Portable Ventilator
- Pulmonary Fit Tester
- Syringes (3cc and 10cc)
- 26 ga ½" needles (for syringes)
- 21 ga. 1 ½" needles (for syringes)
- Triage Tags and Tarps
- Sterile and Non-Sterile dressings, all forms and sizes
- Gauze, all sizes

### **Pharmaceuticals**

- 2Pam Chloride
- Adenosine
- Albuterol Sulfate.083%
- Albuterol MDI
- Atropine 0.1 & 0.4 mg/ml
- Atropine Auto Injectors
- Benadryl
- CANA Auto Injectors
- Calcium Chloride
- Calcium Gluconate 10%
- Ciprofloxin PO



- Cyanide kits
- Dextrose
- Dopamine
- Doxycycline PO
- Epinephrine
- Glucagon
- Lasix
- Lidocaine
- Loperamide
- Magnesium Sulfate
- Methylprednisolone
- Narcan
- Nubain
- Nitroglycerin
- Normal Saline (500 and 1000 ml bags)
- Potassium Iodide
- Silver Sulfadiazine
- Sodium Bicarbonate
- Sterile Water
- Tetracaine
- Thiamine
- Valium

**12. CBRNE Reference Materials** - Reference materials designed to assist emergency first responders in preparing for and responding to a CBRNE incident. This includes but is not limited to the following:

- NFPA Guide to hazardous materials
- NIOSH Hazardous Materials Pocket Guide
- North American Emergency Response Guide
- Jane's Chem-Bio Handbook
- First Responder Job Aids